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Report No. FSP-03-TRAF

The Extent of Trafficking in The Food Stamp Program:

1999—2002



United States
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1999—2002

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THE EXTENT OF TRAFFICKING IN THE FOOD STAMP PROGRAM:

1999 – 2002

EXECUTIVE SUMMARY

Food stamps are intended for food. When individuals sell their benefits for cash it violates the spirit and intent of the Food Stamp Program as well as the law. This practice, known as trafficking, diverts food stamp benefits away from their purpose. It reduces intended nutritional assistance and undermines public perceptions of the integrity and utility of the program.

To combat trafficking, the Food and Nutrition Service conducts undercover investigations of authorized food stores. In addition, the agency has developed powerful new EBT-based administrative tools to identify and sanction traffickers.

A crucial question is the extent to which trafficking exists. Over the last ten years, USDA developed a method to estimate the extent of food stamp trafficking and released two prevalence estimates, first for 1993 and an update for calendar years 1996-1998. This report updates the two earlier analyses for the 1999 – 2002 calendar year period. We have improved the estimate to take advantage of the new EBT-based tools. The findings are based on 14,642 undercover investigations of food retailers and 1,537 EBT-based administrative case actions against retailers suspected of trafficking.

KEY FINDINGS

Program integrity has improved substantially. About \$395 million per year was diverted from food stamp benefits by trafficking between 1999 and 2002. This is less than two-thirds of the \$660 million per year diverted between 1996 and 1998 and less than half of the \$815 million diverted in 1993.

Trafficking now amounts to two-and-a-half cents of every benefit dollar issued, a 29 percent decline in the *rate* of trafficking between 1996 – 1998 and 1999 – 2002.

The stores which redeem the majority of food stamp benefits continue to be stores with the lowest trafficking rates. Almost a quarter of the redemptions flowing through small groceries are trafficked. However, the impact is limited by the fact that small grocery stores account for less than 5 percent of total food stamp redemptions. Supermarkets redeemed nearly 83 percent of all benefit dollars but few of those dollars are trafficked.

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The Extent of Trafficking in the Food Stamp Program:

1999 – 2002

United States Department of Agriculture
Food and Nutrition Service

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INTRODUCTION

Food stamps are intended for food. When individuals sell their benefits for cash it violates the spirit and intent of the Food Stamp Program as well as the law. This practice, known as trafficking, diverts food stamp benefits away from their purpose. It reduces intended nutritional assistance and undermines public perceptions of the integrity and utility of the program. A crucial question is the extent to which trafficking exists.

Over the last ten years, USDA developed a method to estimate the extent of food stamp trafficking and released two prevalence estimates, first for 1993 and an update for calendar years 1996-1998.¹ This report updates the two earlier analyses with data from the 1999 – 2002 calendar year period. As in the past, we focus on authorized food retailers because all trafficking must eventually flow through a food retailer authorized to participate in the Food Stamp Program.² Both paper and electronic food stamp benefits can be sold for cash at a discount on the street. However, authorized food retailers are the only ones who can redeem food benefits for cash from the government. Without access to an authorized store, the last person in the trafficking chain will lose

¹ Theodore F. Macaluso, *The Extent of Trafficking in the Food Stamp Program* (Alexandria, VA: Food and Nutrition Service, USDA; 1995) and Theodore F. Macaluso, *The Extent of Trafficking in the Food Stamp Program: An Update* (Alexandria, VA: Food and Nutrition Service, USDA; 2000).

² While food retailers constitute the overwhelming majority of authorized redeemers of food stamp benefits, the Food Stamp Program has also authorized a few meal services to accept food stamp benefits. For simplicity, we refer to all authorized entities as retailers.

money. Trafficking is more visible if several people are involved in the chain of buying and selling, but the dollars diverted from food assistance are the same regardless of the number of individuals involved. Therefore knowing the amount of trafficking among retailers tells us the maximum value of dollars diverted from food stamp benefits by trafficking for cash.³

As in the past, we calculate three basic measures of trafficking:

- the *amount of trafficking* (i.e., the total sum of dollars trafficked, which depends partly upon the total sum of benefits issued and partly upon the next measure, the rate of trafficking);
- the *rate of trafficking* (the proportion of total benefits issued which were trafficked); and
- the *store violation rate* (the proportion of all authorized stores that engaged in trafficking).

While all three measures are important for different purposes, the second measure – the rate of trafficking – is the one that provides an approximation of FNS’ relative success in combating trafficking because it is independent of total benefits issued.

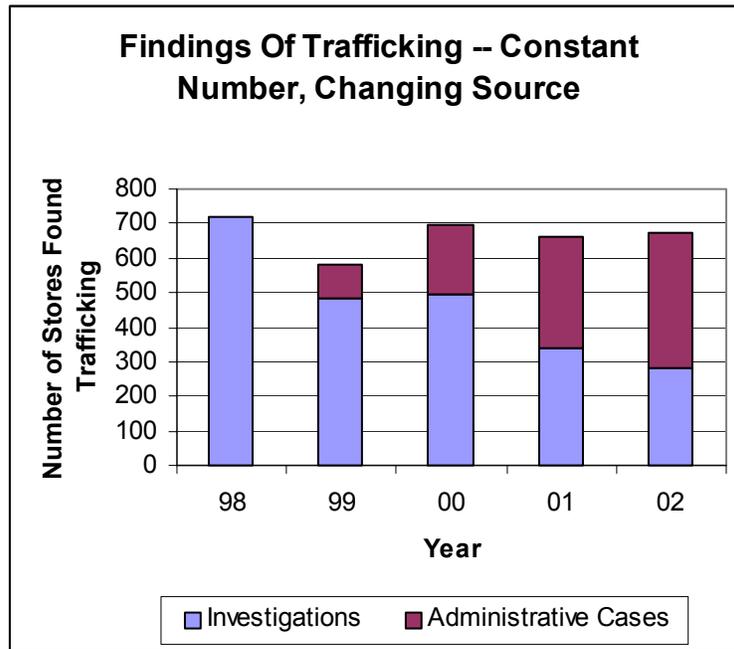
EBT-based Administrative Actions Against Trafficking

Our approach to calculating the current estimate is consistent with past practice, with a significant improvement. With the growth of electronic benefit transfer (EBT), FNS has successfully developed a new EBT-based technique for fighting trafficking (referred to as “administrative cases”). Administrative cases do not involve an undercover investigation. These actions start with lists of stores that exceed thresholds on EBT transaction patterns that suggest the store may be engaging in trafficking. Staff then screen out stores that have an obvious explanation for their otherwise suspicious EBT transaction pattern. Stores that pass the various screens are sorted into those for which an investigation is warranted and those which can be handled administratively. The latter are sent a Charge Letter and given an opportunity to explain the observed pattern. Stores that fail to provide a satisfactory explanation are sanctioned for trafficking.

Prior to 2001, the number of administrative cases per year was too small to have a significant effect on estimates of the extent of trafficking. Starting in 2001, however, administrative cases have increased substantially. While still small in total number, these EBT-based cases have progressively become an important source of findings of trafficking (Figure 1).

³ Trafficked food stamp benefits are not always redeemed for cash from the government. Owners of small authorized or unauthorized stores, restaurants, and the like can buy food stamp benefits for cash, pretend to be recipients and illegally use food stamp benefits to buy food at supermarkets for resale in their stores. We label this "evasion trafficking" (since it is a form of tax evasion) and discuss its impact on our estimate in the Technical Discussion section of this report. It is important to note, however, that under EBT this transfer of benefits outside a store is much more difficult and more rare than it was under coupon benefits.

Figure 1



Source: Food and Nutrition Service, Benefit Redemption Division

Therefore, unlike the prior reports, this report presents *two* estimates of trafficking.

- In order to ensure consistent comparisons with the past, the first estimate uses precisely the same methodology and data sources as the two earlier reports. It is based on evidence from 14,642 new undercover investigations of authorized food retailers. As in the past, the calculation of trafficking consists of investigations that find trafficking divided by all investigations. (This percent is weighted by the national distribution of stores and redemptions as described in the Technical Discussion section.). We refer to this estimate as the “original method.”
- In the second estimate, the calculation of trafficking combines the outcomes of 1,537 EBT-based administrative case actions against retailers suspected of trafficking with the outcomes of the 14,642 investigations used in the first estimate. The calculation of trafficking consists of (a) investigations that find trafficking *plus* administrative case actions that find trafficking divided by (b) all investigations *and* all administrative case actions. Except for this one change, all statistical and weighting procedures are identical with the first estimate. We refer to this estimate as the “EBT method.”

It is important to recognize the limitations and strengths of these estimates. Both start with *detected* trafficking. Both investigations and EBT-based administrative actions may underestimate the extent of trafficking because investigators and EBT-based administrative procedures are unable to detect all trafficking. This source of underestimation, however, is counterbalanced by the fact that authorized retailers are not selected randomly for either investigations or administrative action. Investigations significantly *overestimate* trafficking because investigators rarely visit stores they believe are honest. Likewise administrative actions are only started for stores with suspicious EBT transaction patterns. The Technical Discussion section presents all the sources of over- and underestimation inherent in our approach. However, the non-random selection of stores is the most significant and gives us confidence that both estimates err on the side of *overestimating* trafficking.

FINDINGS

THE LEVEL OF TRAFFICKING IN 1999 – 2002

About \$395 million per year was diverted from food benefits by trafficking between 1999 and 2002 (Table 1). As in prior years, this estimate is more likely to overestimate the dollars diverted from food benefits by direct trafficking in 1999-2002 than to underestimate it.

The amount of trafficking has decreased by more than half since 1993 (Figure 2). Trafficking declined 19 percent between 1993 and 1996 – 1998, from about \$815 million to \$660 million. Trafficking declined another 40 percent between 1996 - 1998 and 1999 - 2002, falling from \$660 million to under \$395 million (EBT method). When we calculate trafficking exactly as we did in the past, trafficking has fallen 65 percent since 1993, to about \$285 million (original method).

Trafficking now amounts to about two-and-a-half cents of every benefit dollar issued (Figure 3). The trafficking rate is the single best measure of effectiveness in combating trafficking. It declined from just under 4 percent of benefits issued in 1993 to 3.5 percent in 1996 – 1998 and to 2.5 percent of benefits issued in 1999 – 2002 (1.8 percent of benefits issued when calculated exactly as done in the past).

The stores that redeem the majority of food stamp benefits continue to be stores with the lowest trafficking rates (Table 2).

- Supermarkets redeemed nearly 83 percent of all benefit dollars but few of those dollars are trafficked. The trafficking rate in supermarkets is less than 1 percent. In comparison to supermarkets, trafficking rates among small stores are 5 to 20 times higher.
- Small groceries continue to have a high trafficking rate. In each of the two previous estimates, about 1 out of every 6 food stamp dollars flowing through small groceries was trafficked. While the original methodology shows that this level is unchanged, the EBT method suggests that the level may actually be closer to 1 of every 4 food stamp dollars. The impact of the continued high rate of trafficking among small groceries is limited by the fact that less than 5 percent of all food stamp redemptions occur in small groceries (Table 3). Redemptions in small groceries have declined 20 percent over time, falling from 5.4 percent in 1993 to 5.2 percent in 1996 – 1998 and to 4.4 percent in 1999 – 2002.
- There have been improvements in the trafficking rates among some categories of smaller stores: trafficking rates at specialty, gas/grocery, and “other” stores all fell.

Table 1 – Dollar Amount of Trafficking

Type of Store	1993	1996 – 1998	1999 – 2002	
	Original Method (000)	Original Method (000)	Original Method (000)	EBT Method (000)
Supermarkets ^a	\$282,058	\$279,163	\$99,746	\$117,180
Large Groceries ^b	46,632	35,255	16,073	21,981
Subtotal	328,690	314,418	115,819	139,161
Small Groceries ^c	177,809	154,109	111,747	159,114
Convenience ^d	78,090	66,809	23,676	40,617
Specialty ^e	117,004	55,782	16,608	22,904
Gas/Grocery ^f	27,528	21,784	6,193	10,315
Other Types ^g	82,605	43,892	13,377	20,684
Subtotal	483,036	342,376	171,601	253,634
All Stores	\$811,726	\$656,794	\$287,420	\$392,795

Note: The data have been annualized.

^a Any store identifying itself to FNS as a supermarket or grocery with gross sales over \$2,000,000.

^b Any store identifying itself as a supermarket or grocery with gross sales between \$500,000 and \$2,000,000.

^c Any store identifying itself as a supermarket or grocery with gross sales under \$500,000.

^d Any store identifying itself by this title, regardless of gross sales.

^e Any store identifying itself by this title, regardless of gross sales (these are almost always single product line stores such as meat markets, fish markets, dairy stores, etc.).

^f Any store identifying itself by this title, regardless of gross sales.

^g Any store identifying itself by a different title, regardless of gross sales (such as produce stands, general stores, grocery/bars, health/natural food stores, milk or bread routes).

Figure 2

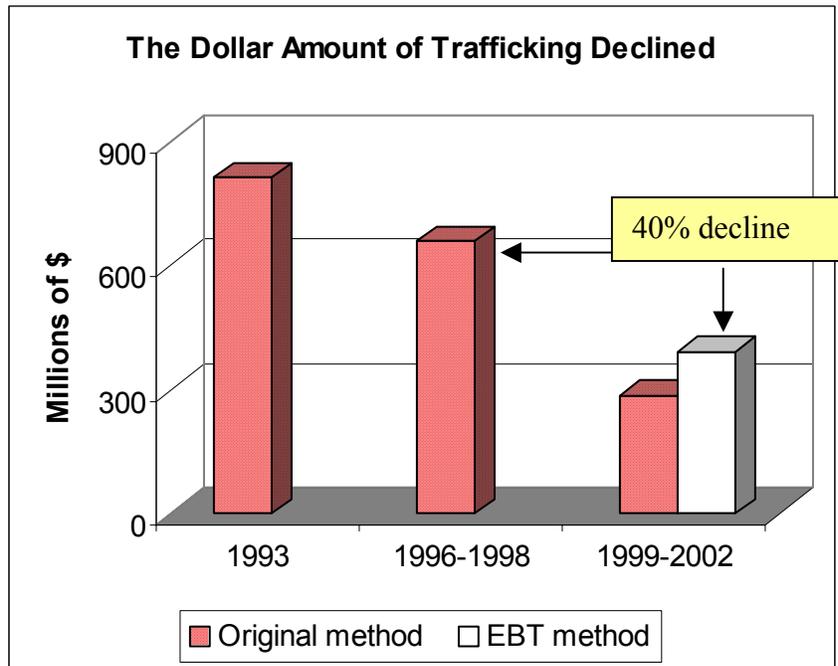


Figure 3

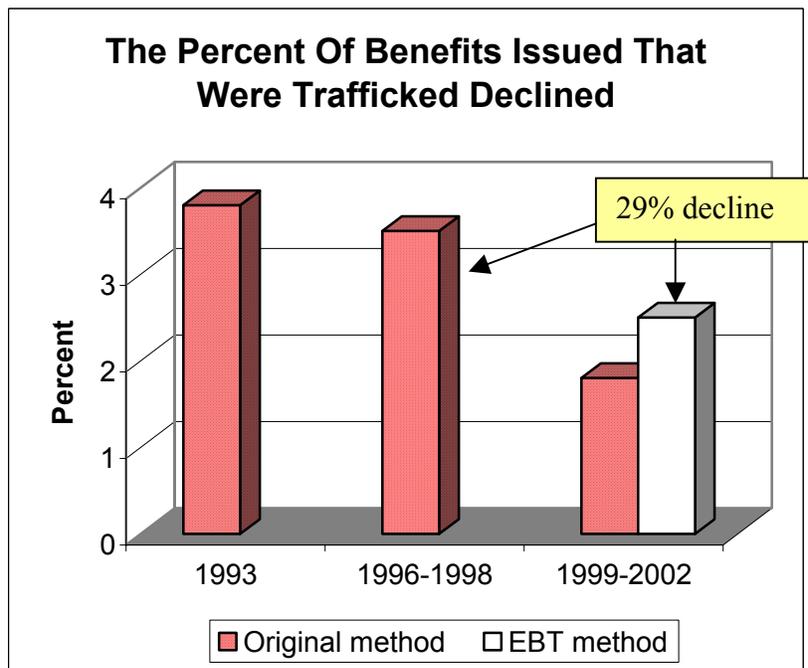


Table 2 – Rate Of Food Stamp Trafficking By Type of Store

Type of Store	1993	1996 – 1998	1999 – 2002	
	Original Method	Original Method	Original Method	EBT Method
Supermarkets	1.7	1.9	0.8%	0.9%
Large Groceries	3.7	3.2	2.2	3.0
Subtotal	1.9	2.0	0.8	1.0
Small Groceries	15.7	15.8	16.3	23.3
Convenience	9.6	10.8	6.5	11.2
Specialty	14.2	8.1	3.5	4.8
Gas/Grocery	10.4	9.7	4.5	7.4
Other Types	12.4	9.4	4.3	6.7
Subtotal	13.0	11.5	8.7	12.9
All Stores	3.8	3.5	1.8	2.5

Notes: The data have been annualized.

The trafficking rate is the percent of trafficked redemptions in investigated stores, weighted by the national distribution of redemptions. The rate figures tell us the percent of all benefits issued that were trafficked. Because the dollar value of trafficking is a function of both rate and total redemptions, trafficking rates in small groceries and convenience stores rose, even though their dollar value of trafficking (in Table 1) declined.

Table 3 - Distribution and Market Shares of Authorized Food Stamp Retailers.

Type of Store	1996 – 1998		1999 – 2002	
	Percent of All		Percent of All	
	Stores	Redemptions	Stores	Redemptions
Supermarkets	14.9%	78.3%	18.8%	82.7%
Large Groceries	7.0	5.8	6.9	4.7
Subtotal	21.9	84.1	25.7	87.4
Small Groceries	20.0	5.2	19.2	4.4
Convenience	26.8	3.3	24.7	2.3
Specialty	9.0	3.7	8.4	3.0
Gas/Grocery	11.9	1.2	11.0	0.9
Other Types	10.4	2.5	11.1	2.0
Subtotal	78.1	15.9	74.3	12.6
All Stores	100.0^a	100.0^b	100.0^c	100.0^d

Notes:

- ^a Based on 237,824 unique food retailers redeeming at any point during the 1996-1998 period (see Appendix I for breakdown by year).
- ^b Based on a total of \$56.16 billion over the three years (see Appendix I for breakdown).
- ^c Based on 200,480 unique food retailers redeeming at any point during the 1999-2002 period (see Appendix I for breakdown).
- ^d Based on a total of \$60.3 billion over the four years (see Appendix I for breakdown).

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REASONS FOR THE DECLINE IN THE LEVEL OF TRAFFICKING

The preceding findings demonstrate that the integrity of the Food Stamp Program has improved. Their implications for future action, however, depend upon the reasons why trafficking declined. We explore two factors: the overall size of the program and the proportion of redemptions flowing through large and small food retailers.

Size of the Food Stamp Program

Perhaps the most obvious potential explanation for the decline in the value of trafficking is the concurrent decline in the size of the Food Stamp Program. In the 1990s, food stamp caseloads fell over 28 percent in response to both welfare reform and a growing economy, and total redemptions fell from \$21 billion in 1993 to an average of \$15 billion per year between 1999 – 2002.⁴ All else equal, the total value of trafficked benefits would fall simply because fewer benefits were issued.

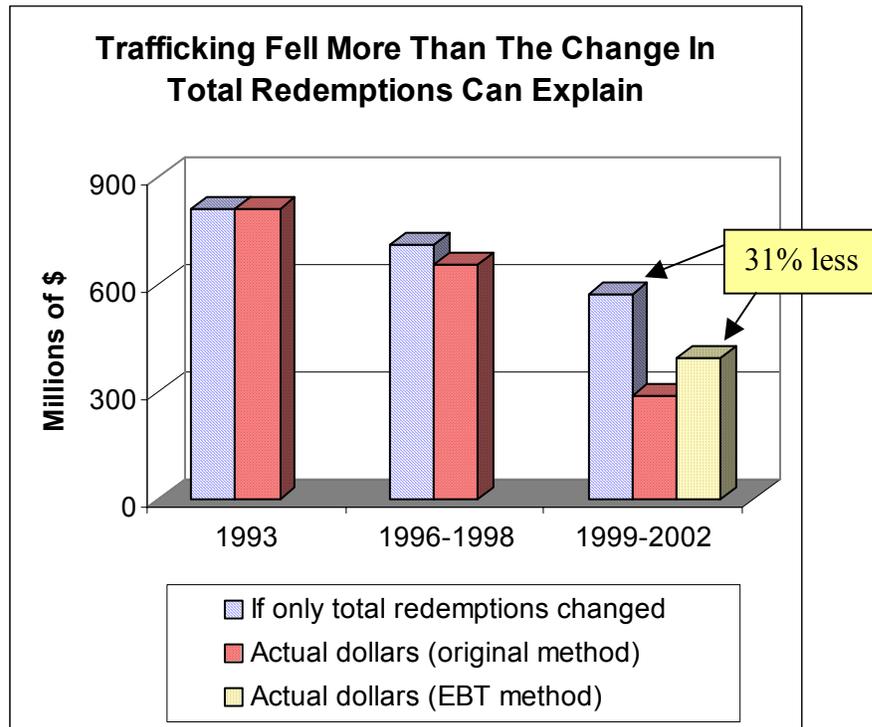
To assess the degree to which the total level of food stamp redemptions influence the dollar amount of trafficking we calculated what would have happened if the *rate* of trafficking had remained at 1993 levels while total redemptions fell (Figure 4). If trafficking had remained at the 1993 rate (3.8 percent of redemptions), then the value of trafficking would have been \$573 million in 1999 – 2002, when in fact it was \$393 million. The actual amount of trafficking is 31 percent lower than it would be if the decline in total food stamp redemptions was the only influence. When we calculate trafficking exactly as we did in the past, the amount – \$287 million – is half of what it would have been if the decline in total redemptions was the only factor. The size of the Food Stamp Program influences the level of trafficking – but other factors play an important role.

Characteristics of Authorized Food Retailers

A second possible reason for the decline in trafficking stems from the fact that the number of food retailers authorized to accept food stamp benefits fell over the last decade, from about 208,000 retailers in September 1993 to just under 152,000 in September 2001. More importantly, the decline occurred among small stores (which have higher trafficking rates). The number of supermarkets (which have very low trafficking rates) stayed constant (31,000 in 1993, 32,000 in 2001). As a result of the shift in store mix, redemptions in supermarkets declined by 24 percent while redemptions in small stores declined by 53 percent. All else equal, we would expect the total value of trafficked benefits to fall since redemptions in stores in categories with higher trafficking rates fell.

⁴ Redemption data corresponds to the estimate period: i.e., the figures used in generating the estimates are summed by calendar year and then annualized.

Figure 4



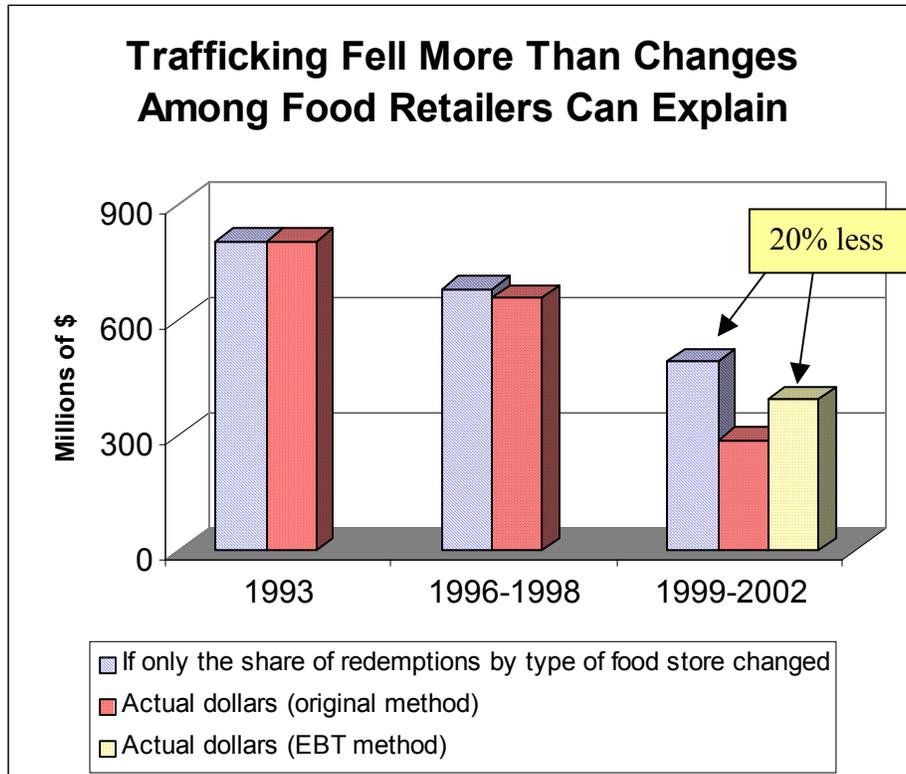
Note: this chart compares the actual trafficking amount with the amount that would have occurred as total redemptions declined if the rate of trafficking had not changed from 1993 levels (i.e., for the striped bars the 1999-2002 figure is the actual 1999-2002 redemption amount times the 1993 trafficking rate). The *differences* between the striped and dotted bars measure the degree to which trafficking is affected by factors *other than* the level of total redemptions.

We follow a similar approach to assess how the proportion of large and small retailers influences the level of trafficking. Figure 5 compares actual trafficking amounts with what they would have been if the trafficking rate by store type had remained at 1993 levels while the share of redemptions in large and small stores changed.

If trafficking by store type had remained at the 1993 rates (1.7 percent of redemptions in supermarkets, 3.7 percent of redemptions in large groceries, 15.7 percent of redemptions in small groceries, etc.), while the proportion of redemptions within each store type changed then the value of trafficking would have been \$491 million in 1999 – 2002, when in fact it was \$393 million. The

actual amount of trafficking is 20 percent lower than it would be if the changing mix of large and small food retailers was the only influence. When we calculate trafficking exactly as we did in the past, the amount of trafficking – \$287 million – is over 40 percent lower. Changes in the proportion of redemptions by type of store appear to account for much of the change in the level of trafficking – but other factors still must play an important role.

Figure 5



Note: this chart compares the actual trafficking amount with the amount that would have occurred as (a) the proportion of redemptions by each type of store changed if (b) the rate of trafficking by store type had not changed from 1993 levels (i.e., for the striped bars the 1999-2002 figure is the total 1999-2002 redemptions times the 1993 trafficking rates weighted by the 1999 – 2002 proportion of redemptions in each type of store). The *differences* between the striped and dotted bars measure the degree to which trafficking is affected by factors *other than* the influence of changes in the authorized food retailer population and total redemptions.

Importance of Factors

The total change in trafficking between 1993 and 1999 – 2002 was a decrease of \$422 million (\$815 million minus \$393 million). Table 4 breaks this down among the factors discussed above.

**Table 4 – Reasons Why Trafficking Declined
(EBT method)**

Factor	Amount	Percent of Total Change
Trafficking in 1993	\$815 million	
Minus trafficking in 1999-2002 if only program size changed	\$573 million	
Change due to program size	\$242 million	57%
Trafficking in 1999-2002 if only program size changed	\$573 million	
Minus trafficking in 1999-2002 if the proportion of redemptions in each type of retailer changed	\$491 million	
Change due to retailers' share of redemptions	\$82 million	20%
Trafficking in 1999-2002 if the proportion of redemptions in each type of retailer changed	\$491 million	
Actual trafficking in 1999-2002 (EBT method)	\$393 million	
Change due to other factors	\$ 98 million	23%
Total change in trafficking	\$422 million	100%

Electronic Benefit Transfer

While the decline in total food stamp redemptions and the shifting proportion of redemptions by store types may account for 60 to 80 percent of the decline in trafficking, the two factors do not explain all of the decline. A possible additional reason for the decline is FNS action to replace paper food coupons with electronic benefit transfer (EBT). Under EBT certain forms of trafficking are harder to conduct and large-scale trafficking is easier to detect. Therefore, we would expect its expansion to reduce both the level and rate of trafficking.

Existing data do not lend themselves to a direct test of this expectation. However, in 1993 virtually all food stamp benefits were in the form of paper coupons; in 1996 – 1998 an average of 69 percent of all benefits were in paper form; and by 1999 – 2002, an average of 20 percent of benefits were paper.

TRAFFICKING AND STORE CHARACTERISTICS

As in the two previous reports, stores located in the poorest neighborhoods continue to be more likely to engage in trafficking than stores located elsewhere (Table 5). Few recipients are likely to sell food stamp benefits for less than they can buy in food, unless the need for cash is overwhelming. It is no surprise, therefore, to find that the rate of trafficking (i.e., proportion of benefits trafficked) continues to vary widely by the economic status of neighborhoods.

We found only a mild relationship between the trafficking rate and urbanicity. The Bureau of the Census classifies zip codes by the urban/rural percentage of residents in the zip code. The urban/rural percentage in the zip code in which a store is located does not show a clear relationship with trafficking rates (Table 6).

Table 5 -Trafficking Rates By Poverty Rate.

Percent of Households in Poverty in Zip Code Where Store is Located:	<i>Trafficking Rates:</i>				<i>Distribution Of Stores And Redemptions</i>			
	Store Violation Rate		Trafficking Rate		Percent of all Stores		Percent of all Redemp- tions	
	1996- 1998	1999- 2002	1996- 1998	1999- 2002	1996- 1998	1999- 2002	1996- 1998	1999- 2002
0 to 10%	9.5	4.7	2.0	0.9	26.5	28.3	23.2	21.6
11 to 20%	10.7	8.8	3.1	1.7	40.5	41.7	40.1	43.1
21 to 30%	13.2	13.0	3.3	4.0	20.5	19.9	21.6	23.0
Over 30%	16.8	17.3	7.1	5.3	12.4	10.2	15.1	12.2
All Stores	11.7	9.3	3.5	2.5	100.0	100.0	100.0	100.0

Notes: The data have been annualized.

Figures for 1996 – 1998 use the original methodology (investigations only). The 1999 – 2002 figures use the EBT methodology (the figures using the original methodology in both time periods are provided in Appendix II).

Trafficking violation rates are calculated separately for stores and redemptions. The store violation rate is the percent of investigated stores caught trafficking weighted by the national distribution of *stores*. The trafficking rate is the percent of trafficked redemptions in investigated stores, weighted by the national distribution of *redemptions*.

Table 6 - Trafficking Rate By Percent Urban.

Stores Located in Zip Codes Where Percent Urban is:	Store Violation Rate		Trafficking Rate	
	1996-1998	1999-2002	1996-1998	1999-2002
0 to 10%	12.9	10.3	2.4	2.7
11 to 50%	11.6	8.8	2.5	1.4
51 to 90%	10.9	6.7	3.0	1.0
90 to 100%	11.6	10.2	3.9	3.2
All Stores	11.7	9.3	3.5	2.5

Notes: The data have been annualized.

Figures for 1996 – 1998 use the original methodology (investigations only). The 1999 – 2002 figures use the EBT methodology (figures using the original methodology in both time periods are provided in Appendix II).

Trafficking violation rates are calculated separately for stores and redemptions. The store violation rate is the percent of investigated stores caught trafficking weighted by the national distribution of *stores*. The trafficking rate is the percent of trafficked redemptions in investigated stores, weighted by the national distribution of *redemptions*.

The two previous reports also explored the relationship between trafficking and the public or private ownership status of stores. The trafficking rate continues to be considerably lower among publicly-owned stores than among their privately-owned counterparts (Table 7). Publicly-owned stores have a trafficking rate of one-tenth-of-one-percent and account for a third of all redemptions (Table 8).

We suggest some caution with these figures, however, because it is unlikely that ownership status per se is the actual influence. The variable probably is a proxy for aspects of store management that cannot be measured directly.

Table 7 – Trafficking By Store Ownership

Type of Store	Trafficking When the Store is Publicly Owned		Trafficking When the Store is Privately Owned	
	Store Violation Rate	Trafficking Rate	Store Violation Rate	Trafficking Rate
Supermarkets	0.0%	0.0%	2.8%	1.5%
Large Groceries	0.0%	0.0%	7.3%	3.1%
Other Types	1.4%	1.4%	13.5%	14.7%
All Stores	1.0%	0.1%	11.1%	3.8%

Notes: The data have been annualized. Calculations are based on the EBT method.

Table 8 – Distribution of Stores by Ownership

Category of Store	Trafficking Rates	Percent of All Stores	Percent of All Redemptions
Publicly Owned Stores	0.1%	17.9%	33.9%
Large Private Stores	1.6%	20.9%	55.3%
Private Other Stores	14.7%	61.2%	10.8%
All Stores	2.5%	100.0%	100.0%

Notes: The data have been annualized. Calculations are based on the EBT method.

CONCLUSION AND IMPLICATIONS FOR PROGRAM INTEGRITY

Over the last ten years, USDA developed a method to estimate the extent of food stamp trafficking and released two prevalence estimates, first for 1993 and an update for calendar years 1996-1998. This report updates the two earlier analyses with 14,642 new undercover investigations of trafficking completed during the 1999 – 2002 calendar year period. For the first time, we also include 1,537 EBT-based administrative actions against trafficking. The new prevalence estimates indicate that:

Program integrity has improved substantially:

- About \$395 million per year in food stamp benefits was diverted by trafficking between 1999 and 2002. As in prior years, this estimate is more likely to overestimate the dollars diverted from food benefits by direct trafficking in 1999-2002 than to underestimate it.
- Trafficking is less than two-thirds of the \$660 million per year diverted between 1996 and 1998 and half of the \$815 million diverted in 1993. When we calculate trafficking exactly as we did in the past, trafficking has fallen 65 percent since 1993, to \$287 million.

Trafficking now amounts to two-and-a-half cents of every benefit dollar issued, a 29 percent decline in the *rate* of trafficking between 1996 – 1998 and 1999 – 2002. The trafficking rate is the single best measure of effectiveness in controlling trafficking. It declined from just under 4 percent of benefits issued in 1993 to 3.5 percent in 1996 – 1998 and to 2.5 percent of benefits issued in 1999 – 2002 (1.8 percent of benefits issued when calculated exactly as done in the past).

The decline in total food stamp redemptions and the changing mix of large and small food retailers account for much of the decline in the value of trafficked benefits, but not all.

Trafficking is about 20 percent lower than it would be if these were the only two influences. It is possible that FNS actions to replace paper food coupons with EBT also played a meaningful role in reducing trafficking.

The stores which redeem the majority of food stamp benefits continue to be stores with the lowest trafficking rates.

- Almost a quarter of the redemptions flowing through small groceries are trafficked. The impact of the continued high rate of trafficking among small groceries is limited by the fact that less than 5 percent of all food stamp redemptions occur in small groceries.
- Supermarkets redeemed nearly 83 percent of all benefit dollars but few of those dollars are trafficked. The trafficking rate in supermarkets is less than 1 percent.

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TECHNICAL DISCUSSION

APPROACH

This report presents two estimates of trafficking. Both estimates focus on authorized food retailers. Knowing the prevalence of trafficking among retailers tells us the maximum amount of dollars diverted from food benefits by trafficking for cash.

Estimate 1 – Consistent Methods and Data

In order to ensure consistent comparisons with the past, the first estimate uses precisely the same methodology and data sources as the two earlier reports. It is based on evidence from 14,642 new undercover investigations of authorized food retailers. In the text we refer to this as the original-method estimate.

The Food and Nutrition Service (FNS) maintains a staff of investigators who work undercover to determine whether authorized food stores sell ineligible items or engage in trafficking. Stores caught violating are fined or removed from the program and in some instances prosecuted.

We obtained all investigations provided by the four FNS compliance branch offices from their Automated Investigation and Monitoring System (AIMS) databases. In total, 50,781 investigative reports were contained in those files, of which 1,133 were of unauthorized retailers. There is no information on store characteristics for unauthorized retailers; thus they were eliminated from the analysis. Of the 49,738 investigations of authorized retailers, there were 7,930 instances in which a retailer was investigated more than once. If in scanning any of multiple case records, a retailer was found to be in violation after 1998, we determined that the retailer was a violator (even if the retailer had a subsequent case in which they were not found to be in violation). The resulting database contained information about whether the retailer had violated since 1998. This resulted in a database of 41,808 unique stores. To conform to the time period of the study, we eliminated 27,119 stores in which the investigative reports were distributed before 1999 (or had missing distribution dates). Of the 14,689 remaining investigative reports, we were unable to match 47 stores to Census data or retailer characteristics data (42 of these were in Guam). The remaining 14,642 investigative reports are the ones used in the analysis.

For the 1999 – 2002 original-method estimate, we followed the same approach used in both earlier reports:⁵

- First, we sorted the 14,642 completed investigations across five specific dimensions that categorize store types and store locations. The five dimensions we employ consist of three that categorize stores (type of store, ownership, and level of food stamp redemptions) and two that categorize the zip code in which each store was located (degree of urbanization, percent of households in poverty). Specific definitions employed are provided in Table 9.
- Second, for each specific category of store and location we compiled national data from January 1999 through October 2002 on the total number of stores and the total food stamp redemptions in that category.
- Third, we analyzed the investigation outcomes and calculated the weighted trafficking and store violation rates within each category. The numbers of investigations in each store category are large enough to give high confidence in the estimates, ranging from a low of 484 investigations of supermarkets to a high of 4839 investigations of small groceries.
- Fourth, we weighted the investigation data to accurately represent the national figures.⁶ We calculated two of our three measures: the trafficking rate (which is a redemption-based rate to reflect dollar diversions) and the store violation rate (which is a store-based rate to identify the kinds of stores that contain the most violators).

⁵ There is one trivial difference in the approaches: the 1993 estimate involved data on investigations started by January 1, 1991 and completed by March 1994 which were combined with the twelve months of redemption data from 1993 and presented as a single result for calendar 1993; the 1996 – 1998 estimate and this current one involve data on investigations completed between January of the start year (1996, 1999) through the end points (December 1998, October 2002) combined with redemptions from the same respective periods, which we annualize and present as a single result for the estimate period. The different lengths of time involved in each estimate (1.5 years, 3 years and 4 years) do not affect the results since all information is annualized.

⁶ Statistically, the FNS investigation database encompasses a sufficient number of cases to be used as a post-stratified sample of the national "population" of retailers. By categorizing the investigated stores on the five dimensions described above and weighting the stores, by category, to reflect the national population of retailers, by category, we are able to draw valid conclusions about the national situation.

Table 9 – Dimensions Used To Categorize Store Types And Locations

Dimension	Description
<p>1. Type of Store</p>	<p>Based on each retailer’s identification of its store type on the FNS application form, store types were collapsed into the following seven categories (to ensure an adequate number of cases of each type):</p> <p>Supermarket any store identifying itself as a supermarket or grocery with gross sales over \$2,000,000.</p> <p>Large grocery any store identifying itself as a supermarket or grocery with gross sales between \$500,000 and \$2,000,000.</p> <p>Small grocery any store identifying itself as a supermarket or grocery with gross sales under \$500,000.</p> <p>Convenience any store identifying itself by this title, regardless of gross sales.</p> <p>Specialty any store identifying itself by this title, regardless of gross sales. They are almost always single product line stores such as meat markets, fish markets, dairy stores, etc.</p> <p>Gas/Grocery any store identifying itself by this title, regardless of gross sales.</p> <p>Other Types any store identifying itself by a title different than any of the preceding, regardless of gross sales. Examples include produce stands, general stores, combination grocery/bars, health/natural food stores, milk and/or bread routes.</p>
<p>2. Ownership</p>	<p>Ownership types on the FNS application form were collapsed to the following two categories (to ensure an adequate number of cases of each type).</p> <p>Public any store identifying itself to FNS as a public corporation (i.e., a retailer whose stock trades publicly).</p>

Table 9 – Dimensions Used To Categorize Store Types And Locations	
Dimension	Description
	<p>Private any store identifying itself to FNS as other than publicly-owned. This includes private (i.e., closely-held) corporations as well as partnerships, sole proprietorships, co-ops, etc.</p> <p>("Franchise" is a separate category on the FNS application, not an ownership type: both public and private ownership categories include stores that report themselves as franchises.)</p>
3. Amount of Food Stamp Business	Stores were categorized into deciles on the basis of food stamp redemptions. The purpose was statistical, rather than analytical, to ensure that large disparities in redemptions by stores do not distort results.
4. Urbanization	Based on census data for the zip code in which the store is located. Four categories were employed: 0 to 10 percent urban population, 11 to 50 percent, 51 to 90 percent, and over 90 percent.
5. Poverty	Based on census data for the zip code in which the store is located. Four categories were employed: 0 to 10 percent of residential population below poverty, 11 to 20 percent, 21 to 30 percent, and over 30 percent.

-
- Finally, we multiplied the redemption-based trafficking rate against the total food stamp redemptions in each category and summed across all categories to obtain the first of our three measures: the amount of trafficking, which provides an estimate of dollars diverted from food benefits by trafficking in the Food Stamp Program. The specific calculation was a two-stage one:
 - The first stage combines the data on the trafficking rates by type of store and store location with national redemption data to yield an estimate of the *gross* redemptions by authorized food stores found trafficking.

- The second stage accounts for the fact that some of the gross redemptions are legitimate food sales. To maintain consistency with the earlier estimate, we continue to use the assumption that legitimate food sales account for 60 percent of the gross redemptions among supermarkets and large grocery stores caught trafficking and treat 40 percent of their gross redemptions as trafficked. Among all other types of food stores, we assume that only 10 percent of the gross redemptions are legitimate food sales and treat 90 percent of their gross redemptions as trafficked.

Estimate 2 – Consistent Methods, Expanded Data

The second estimate uses the same statistical methodology described under estimate 1 and all 14,642 investigations included in estimate 1. However, it *adds* data that were unavailable before 1999: the results of 1,537 EBT-based actions against food retailers suspected of trafficking (“administrative cases”). The trafficking rate within each category was calculated as follows:

$$\frac{\text{Investigations that found trafficking} + \text{Administrative cases that found trafficking}}{\text{All investigations} + \text{All administrative cases}}$$

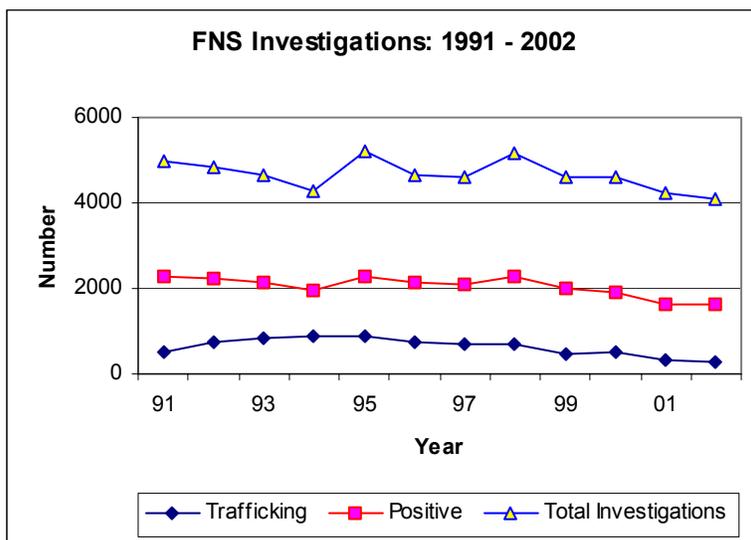
All other steps in calculating estimate 2 are identical to those described above. In the text we refer to estimate 2 as the EBT method.

Data Considerations

Because the outcomes of in-person undercover investigations are central to both of the USDA estimates of trafficking, change in the quantity or quality of these investigations between reporting periods has the potential to distort any comparisons over time.

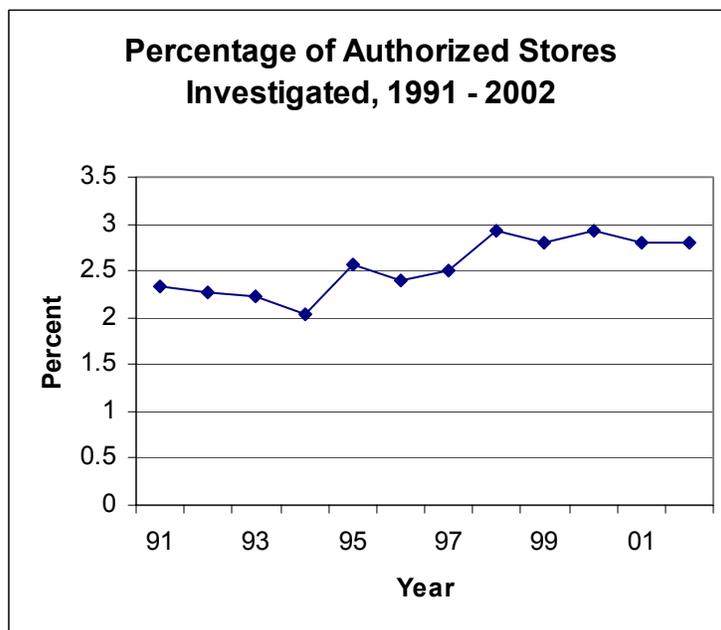
There has been no meaningful change in the quantity of FNS investigations. The numbers per year remain within their historic range of 4,100 to 5,300 investigations (Figure 6) while the number of investigations per authorized store has increased (Figure 7).

Figure 6



Source: Food and Nutrition Service, Benefit Redemption Division Annual Reports

Figure 7



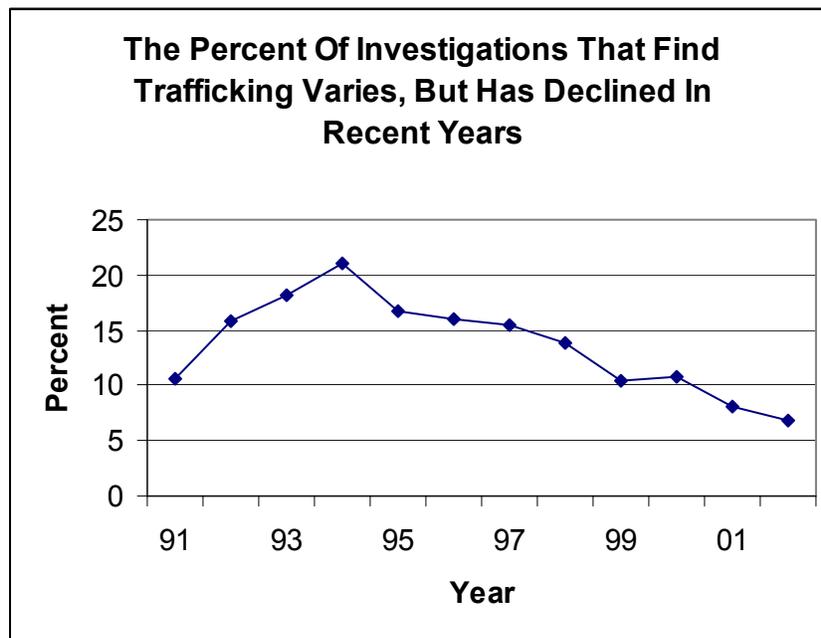
Source: Food and Nutrition Service, Benefit Redemption Division Annual Reports

At the same time, the number of investigations where trafficking is detected has been declining, from a high of 21 percent in 1994 to 7 percent in 2002 (Figure 8). A crucial question is whether this decline reflects less trafficking or changes in the ability of traffickers to avoid detection.

To some degree, FNS Compliance Branch (CB) investigations have a deterrent effect, reducing trafficking among other stores. After a quality positive investigation, appropriate action is taken against storeowners. The storeowners tell their employees and other storeowners about actions taken against them due to food stamp violations. FNS Regional and Field Offices also issue press releases so that the general public, including food stamp recipients, are made aware of FNS' compliance monitoring efforts. These actions increase voluntary compliance, which reduces trafficking within the program. Some of the decline in the percentage of investigations that find trafficking may reflect the cumulative effect of CB actions.

Another possibility is that traffickers have gotten smarter and are better able to elude investigators. The quality of investigations is hard to measure; however, continuing experience, routine sharing of information about investigative techniques among investigators, and greater use of EBT data to select stores for investigation make it likely that the quality of investigations has improved – and that would tend to compensate for any changes in the behavior of traffickers.

Figure 8



Source: Food and Nutrition Service, Benefit Redemption Division Annual Reports

A final possibility is that investigative techniques that worked for trafficking with paper food stamp coupons do not work as well under EBT. While the degree to which this occurs is unknown, the addition of administrative cases to the estimate compensates for any difficulty in conducting investigations under EBT.

ESTIMATION ERROR

When we look at additional considerations that bear on trafficking, we find two factors that would tend to increase our estimate and three others that would tend to decrease it. It is important to discuss each of these additional considerations explicitly.

Sources Of Underestimation

1. Our procedure underestimates two aspects of the trafficking problem. The first aspect leading to *underestimation* is *evasion trafficking*:
 - Among small retailers that are family-owned or where ownership is closely held, some violators did not redeem coupons for cash from the government (direct trafficking) but bought food stock for resale from large stores with trafficked coupons (a form of tax evasion we label "evasion trafficking"). This practice appears to be continuing under EBT although the frequency is not known. Evasion trafficking is a gray area, since the practice does not necessarily involve discounting: a small firm makes an illicit profit at the least risk of detection if it accepts food stamp benefits at full value for food from legitimate recipients, but illegally uses them to buy food at supermarkets for resale in their own store.
 - In our estimate we are most concerned about evasion trafficking when it is linked to discounting (i.e., the firm buys food stamp benefits at a discount). We have no data to estimate the extent of evasion trafficking by unauthorized food stores or restaurants. However, evasion trafficking by authorized retailers *is* captured by our estimating procedure, when the trafficking involves discounting. The data we use to estimate direct trafficking adequately capture the rate at which *all* authorized stores engage in discounting. If redemptions from unauthorized businesses could be measured, then the evasion trafficking factor would increase the national estimate of dollars diverted from food benefits by trafficking but would not change the store-based violation rates useful for targeting future action.
2. The second potential cause of *underestimation* is *network trafficking*:
 - Some violating stores will traffic with strangers while others restrict their illegal activities to people they know (which we label "network trafficking"). Investigators can and do catch this type of trafficking, but it involves a more complicated investigation.

- As a result, some network trafficking is included in our original-method estimate (because our investigations include some cases where the network was penetrated and trafficking was caught). But other instances of network trafficking are not included in our original-method estimate (because investigators were unable to penetrate the network and make the case). If investigators could catch all instances of trafficking, the national investigation-based estimate of trafficking diversions would increase.⁷
- Administrative cases, which depend only upon observed EBT transaction patterns, can have much greater success at catching network trafficking. The addition of administrative cases in the new EBT-method estimate substantially decreases concern about this source of underestimation, but does not entirely eliminate it (since administrative actions do not detect all instances of network trafficking).

Sources Of Overestimation

1. At the same time, our procedure overestimates other aspects of the trafficking problem. A first source of *overestimation* is the procedure used to determine *legitimate food sales*.
 - With extremely rare exceptions, stores that engage in trafficking also sell food and we must allocate some proportion of their total redemptions to legitimate food sales and the balance to trafficking. We used very low figures to estimate the percentage of legitimate food sales by violating stores: when a supermarket or large grocery is caught trafficking we assume that 40 percent of all the store's redemptions are trafficked (even if the trafficking only involved a single clerk away from the register area); among small stores caught trafficking we assume that 90 percent of the store's redemptions are trafficked. While these figures are unrealistically high, we choose them purposefully because it serves our goal of assuring an estimate of the *maximum* benefits diverted by trafficking.
 - To be consistent with the 1993 and 1996 – 1998 figures, we keep our allocation figures the same in this report – but our estimates of trafficking diversion would be lower to the extent that our method to estimate legitimate food sales was more precise. This factor affects both the original- and EBT-method estimates.

⁷ An additional *potential* consideration is the quality of the investigation. Even when retailers are willing to traffic with strangers, investigators with greater experience are likely to catch more trafficking than investigators with lesser experience. We believe the overall quality of investigations in our sample is high for two reasons. First, FNS investigative procedures provide adequate time and resources to establish a case. Second, in the earlier report we only used cases from 1991 and later, to ensure that investigators either had at least two years of experience in establishing trafficking cases (or were hired with the understanding that trafficking cases were highest priority). In the second estimate and this third one, most investigators have at least six years of experience in establishing trafficking cases, which strengthens our confidence in these estimates.

2. Another source of *overestimation* stems from the fact that the *data on administrative cases are incomplete*. The development of an administrative case starts with lists of stores that exceed thresholds on suspicious EBT transaction patterns. The process of building an administrative case involves screening out stores that have an obvious explanation for their otherwise suspicious EBT transaction pattern. Stores that pass the various screens are sorted into those for which an investigation is warranted and those which can be handled administratively. The latter are sent a letter containing charges of program violations (“Charge Letter”) and given an opportunity to explain the observed pattern. To properly compute a trafficking rate with administrative cases we need to know the number of stores that exceeded thresholds but were screened out. The proper computation is:

$$\frac{\text{All Charge Letters that find trafficking}}{\text{All Charge Letter stores} + \text{All stores screened out}}$$

Data has not been kept on screened out stores, however, so the administrative case component of our estimate is based on:

$$\frac{\text{All Charge Letters that find trafficking}}{\text{All Charge Letter stores}}$$

This causes the EBT method approach to *overestimate* the amount of trafficking. FNS is exploring ways to maintain appropriate data to address this problem before the next trafficking update is computed.

3. A final – and major – source of overestimation is that investigations are *a non-random sample of stores*.
- Our original estimating procedure relies on investigations targeted to find fraud: our estimate would decrease substantially if investigators had randomly selected from all stores, rather than selected suspicious stores on purpose. Likewise our estimate would decrease substantially if the Charge Letters that underlie administrative cases were sent randomly to all stores, rather to stores that are suspicious because they exceed thresholds on EBT transaction scans.
 - Of our five technical considerations, this is arguably the one with the largest impact on our estimate. It applies to both the original- and EBT-method estimates and supports our goal of ensuring that we can estimate the *maximum* amount of dollars diverted by trafficking.

APPENDIX I

We processed all stores received from FNS redemption files but used only the ones with a match to zip code data in the analysis (since two of the five dimensions underlying the estimates are based on information linked to zip code). Stores that had no redemptions were dropped from the analysis (unless they had been investigated, in which case they were retained). For each specific year the total number of authorized retailers received and total number in our analysis file are as follows:

	<u>Received</u>	<u>Analysis File</u>	<u>Percent Matchable</u>
1996:	205,318	202,850	98.8
1997:	196,408	193,510	98.5
1998:	184,055	180,857	98.3
1999:	156,594	156,169	99.7
2000:	157,587	157,116	99.7
2001:	154,802	154,356	99.7
2002:	147,034*	146,585	99.7

* Includes only the first 10 months of 2002.

For each specific year the sum of redemptions (total dollars) was:

	<u>Received</u>	<u>Analysis File</u>	<u>Percent Matchable</u>
1996:	\$21,713,774,005	\$21,580,132,008	99.4
1997:	\$18,463,396,131	\$18,322,710,580	99.2
1998:	\$16,433,240,311	\$16,260,221,191	99.0
1999:	\$15,144,649,239	\$15,090,992,653	99.6
2000:	\$14,661,266,860	\$14,605,272,650	99.6
2001:	\$16,056,825,785	\$16,002,812,646	99.7
2002:	\$14,438,703,946*	\$14,385,848,187	99.6

* Includes only the first 10 months of 2002.

APPENDIX II

Tables Based On The Original-Method Estimate

Table 10 – Trafficking By Percent In Poverty: Original Methodology

Percent of Households in Poverty in Zip Code Where Store is Located:	Trafficking Rates:				Distribution Of Stores And Redemptions			
	Store Violation Rate		Trafficking Rate		Percent of all Stores		Percent of all Redemp- tions	
	1996- 1998	1999- 2002	1996- 1998	1999- 2002	1996- 1998	1999- 2002	1996- 1998	1999- 2002
0 to 10%	9.5	3.4	2.0	0.5	26.5	28.3	23.2	21.6
11 to 20%	10.7	5.5	3.1	1.3	40.5	41.7	40.1	43.1
21 to 30%	13.2	8.7	3.3	3.0	20.5	19.9	21.6	23.0
Over 30%	16.8	11.7	7.1	3.7	12.4	10.2	15.1	12.2
All Stores	11.7	6.2	3.5	1.8	100.0	100.0	100.0	100.0

Note: The data have been annualized.

Table 11 – Trafficking By Percent Urban, Original Methodology

Stores Located in Zip Codes Where Percent Urban is:	Store Violation Rate		Trafficking Rate	
	1996-1998	1999-2002	1996-1998	1999-2002
0 to 10%	12.9%	5.6%	2.4%	1.4%
11 to 50%	11.6	4.9	2.5	1.0
51 to 90%	10.9	4.4	3.0	0.7
90 to 100%	11.6	7.2	3.9	2.4
All Stores	11.7	6.2	3.5	1.8

Note: The data have been annualized.